DOCUMENT #2231355

FORM 4 Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109

DE	ET	OE	ES

RECEIVED 10/4/2012

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry Information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 100185
2. Name of Operator: Encana Oil & Gas (USA) Inc.
3. Address: 370 17th Street Suite 1700
   City: Denver State: CO Zip 80202
4. Contact Name: Julia M. Carter
   Phone: 720.876.5240
   Fax: 720.876.6240
5. API Number
   OGCC Facility ID Number 323905
6. Well/Facility Name: Standard Shale 7. Well/Facility Number 6401
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW Sec 9 T7S-R99W, 6th PM
9. County: Garfield 10. Field Name: Wildcat
11. Federal, Indian or State Lease Number:

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page	X	
Other		

General Notice

☐ **CHANGE OF LOCATION:** **Attach New Survey Plat** (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:				
Change of **Surface** Footage **to** Exterior Section Lines:				
Change of **Bottomhole** Footage **from** Exterior Section Lines:				
Change of **Bottomhole** Footage **to** Exterior Section Lines:				attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude ____ Distance to nearest property line ____ Distance to nearest bldg, public rd, utility or RR ____

Longitude ____ Distance to nearest lease line ____ Is location in a High Density Area (rule 603b)? Yes/No NO

Ground Elevation ____ Distance to nearest well same formation ____ Surface owner consultation date: NA

GPS DATA:

Date of Measurement ____ PDOP Reading ____ Instrument Operator's Name ____

☐ **CHANGE SPACING UNIT**

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ **Remove from surface bond** Signed surface use agreement attached

☐ **CHANGE OF OPERATOR (prior to drilling):**
Effective Date:
Plugging Bond: ☐ Blanket ☐ Individual

☐ **CHANGE WELL NAME** **NUMBER**
From:
To:
Effective Date:

☐ **ABANDONED LOCATION:**
Was location ever built? ☐ Yes ☐ No
Is site ready for Inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ **NOTICE OF CONTINUED SHUT IN STATUS**
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT

☐ **SPUD DATE:**

☐ **REQUEST FOR CONFIDENTIAL STATUS** (6 mos from date casing set)

☐ **SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK** *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ **RECLAMATION:** Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately ____ ☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date:

☐ Report of Work Done
Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)
☐ Change Drilling Plans
☐ Gross Interval Changed?
☐ Casing/Cementing Program Change
☐ Request to Vent or Flare
☐ Repair Well
☐ Rule 502 variance requested
☒ Other: COA Compliance
☐ E&P Waste Disposal
☐ Beneficial Reuse of E&P Waste
☐ Status Update/Change of Remediation Plans for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Julia M Carter Date: 10/4/12 Email: julia.carter@encana.com

Print Name: Julia M. Carter Title: Regulatory Analyst

COGCC Approved: Alex Fischer Title Env. Supervisor Date: 12/11/2012

CONDITIONS OF APPROVAL, IF ANY: Western CO

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 100185 API Number:
2. Name of Operator: Encana Oil & Gas (USA) Inc. OGCC Facility ID # 323905
3. Well/Facility Name: Standard Shale Well/Facility Number: 6401
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW Sec 9 T7S-R99W, 6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

The following COA was given upon approval of Axia and Encana Transfer and Receiving Water Reuse Plans:

Approval of this plan is contingent upon analytical laboratory results for representative samples of Encana's destination formation water from wells with location IDs: 383216 and 423633. Analytical results shall include all testing methods described on pages 5-6 of the Produced Water Reuse Waste Minimization Plan. Operator shall reference the remediation number assigned to this Waste Transfer Agreement and submit analytical data within 60 days from sundry approval date.

Please note that water from wells with location IDs 383216 and 423633 was not delivered to Axia therefore there are no analytical laboratory results to submit.

Please find the attached water samples from Axia's location # 421047.
Water from location # 421047 was delivered to Encana's Standard Shale 6401 pad, location # 323905.
The water was used at the KM C08 799 pad, location # 423633.

Please note the remediation number is 2111.

Mountain States ACCUTEST LABORATORIES

08/13/12

Technical Report for

Olsson Associates

AXIA Water Handling Facility #421047

012-0250

Accutest Job Number: D31495

Sampling Date: 01/30/12

Report to:

Olsson Associates
826 21 1/2 Road
Grand Junction, CO 81505
shall@oaconsulting.com

ATTN: Stuart Hall

Total number of pages in report: **61**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8 9 10 11

Table of Contents

-1-

Sample Summary

Olsson Associates

Job No: D31495

AXIA Water Handling Facility #421047
Project No: 012-0250

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D31495-1	01/30/12	18:45	SH	02/01/12	AQ	Water	AXIA WP
D31495-1F	01/30/12	18:45	SH	02/01/12	AQ	Water Filtered	AXIA WP

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Olsson Associates	**Job No**	D31495
Site:	AXIA Water Handling Facility #421047	**Report Date**	8/13/2012 3:02:38 PM

On 02/01/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D31495 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** V6V606

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31305-1MS, D31305-1MSD were used as the QC samples indicated.
- The blank spike (BS) recovery(s) of 2-Hexanone, Methyl ethyl ketone are outside control limits.
- V6V606-BS for 2-Hexanone and Methyl ethyl ketone: Analyte is over range, but it is ND in associated samples.

Extractables by GCMS By Method SW846 8270C

Matrix AQ **Batch ID:** OP5279

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D31341-15MS, D31341-15MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The blank spike (BS) recovery(s) of Pyrene are outside control limits.
- OP5279-BS for Pyrene: Outside control limits. Compounds are ND for associated samples.

Volatiles by GC By Method SW846 8015B

Matrix AQ **Batch ID:** GGA846

- All samples were analyzed within the recommended method holding time.
- Sample(s) D31495-1MS, D31495-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix AQ **Batch ID:** OP5278

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D31341-14MS, D31341-14MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP6759

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31447-1MS, D31447-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix	AQ	Batch ID:	GP6423

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31484-1MS, D31484-1MSD were used as the QC samples for the Bromide, Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Phosphate, Ortho, Sulfate, Bromide analysis.
- D31495-1 for Nitrogen, Nitrate/Nitrite and Phosphate, Ortho: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2320B

Matrix	AQ	Batch ID:	GN13515

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31358-1DUP, D31358-1MS, D31358-1MSD were used as the QC samples for the Alkalinity, Total as CaCO3 analysis.

Matrix	AQ	Batch ID:	GN13520

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix	AQ	Batch ID:	GN13521

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2510B

Matrix	AQ	Batch ID:	GP6428

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31495-1DUP were used as the QC samples for the Specific Conductivity analysis.

Wet Chemistry By Method SM20 2540C

Matrix	AQ	Batch ID:	GN13519

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D31485-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 4500H

Matrix	AQ	Batch ID:	GN13506

- The following samples were run outside of holding time for method SM20 4500H: D31495-1

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D31495
Account: Olsson Associates
Project: AXIA Water Handling Facility #421047
Collected: 01/30/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D31495-1	**AXIA WP**					
Acetone		5170	250	130	ug/l	SW846 8260B
Benzene		846	25	13	ug/l	SW846 8260B
Ethylbenzene		218	50	13	ug/l	SW846 8260B
Toluene		2760	50	25	ug/l	SW846 8260B
Xylene (total)		3500	100	50	ug/l	SW846 8260B
2,4-Dimethylphenol		67.9	24	4.0	ug/l	SW846 8270C
2-Methylphenol		232	24	2.6	ug/l	SW846 8270C
4-Methylphenol		97.8	24	2.4	ug/l	SW846 8270C
Phenol		233	24	2.4	ug/l	SW846 8270C
Benzyl Alcohol		27.7	24	3.0	ug/l	SW846 8270C
Dibenzofuran		4.1 J	24	2.8	ug/l	SW846 8270C
Fluorene		13.9 J	24	2.8	ug/l	SW846 8270C
2-Methylnaphthalene		269	24	3.4	ug/l	SW846 8270C
Naphthalene		99.2	24	3.7	ug/l	SW846 8270C
TPH-GRO (C6-C10)		21.0	2.0	1.0	mg/l	SW846 8015B
TPH-DRO (C10-C28)		46.4	0.38	0.30	mg/l	SW846-8015B
Alkalinity, Bicarbonate as CaCO3		1040	5.0	2.0	mg/l	SM20 2320B
Alkalinity, Total as CaCO3		1040	5.0	2.0	mg/l	SM20 2320B
Bromide		33.5	10	5.0	mg/l	EPA 300/SW846 9056
Chloride		12200	250	100	mg/l	EPA 300/SW846 9056
Fluoride		16.2	10	2.5	mg/l	EPA 300/SW846 9056
Solids, Total Dissolved		21300	10	5.3	mg/l	SM20 2540C
Specific Conductivity		34900	1.0		umhos/cm	SM20 2510B
Sulfate		56.6	25	10	mg/l	EPA 300/SW846 9056
pH		7.54			su	SM20 4500H
D31495-1F	**AXIA WP**					
Calcium		157000	400	15	ug/l	SW846 6010C
Iron		2740	70	13	ug/l	SW846 6010C
Magnesium		29300	200	10	ug/l	SW846 6010C
Manganese		474	5.0	0.31	ug/l	SW846 6010C
Potassium		57600	1000	55	ug/l	SW846 6010C
Sodium		7030000	4000	1100	ug/l	SW846 6010C

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1
Matrix: AQ - Water
Method: SW846 8260B
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V11491.D	25	02/02/12	BR	n/a	n/a	V6V606
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	5170	250	130	ug/l	
71-43-2	Benzene	846	25	13	ug/l	
75-27-4	Bromodichloromethane	ND	50	13	ug/l	
75-25-2	Bromoform	ND	50	13	ug/l	
108-90-7	Chlorobenzene	ND	50	13	ug/l	
75-00-3	Chloroethane	ND	50	13	ug/l	
67-66-3	Chloroform	ND	50	13	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	250	130	ug/l	
75-15-0	Carbon disulfide	ND	50	35	ug/l	
56-23-5	Carbon tetrachloride	ND	50	13	ug/l	
75-34-3	1,1-Dichloroethane	ND	50	13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	50	19	ug/l	
107-06-2	1,2-Dichloroethane	ND	50	13	ug/l	
78-87-5	1,2-Dichloropropane	ND	50	13	ug/l	
124-48-1	Dibromochloromethane	ND	50	13	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	25	8.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	50	13	ug/l	
541-73-1	m-Dichlorobenzene	ND	50	13	ug/l	
95-50-1	o-Dichlorobenzene	ND	50	14	ug/l	
106-46-7	p-Dichlorobenzene	ND	50	13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	50	23	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	50	13	ug/l	
100-41-4	Ethylbenzene	218	50	13	ug/l	
591-78-6	2-Hexanone	ND	50	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	250	63	ug/l	
74-83-9	Methyl bromide	ND	130	73	ug/l	
74-87-3	Methyl chloride	ND	50	15	ug/l	
75-09-2	Methylene chloride	ND	130	63	ug/l	
78-93-3	Methyl ethyl ketone	ND	250	63	ug/l	
100-42-5	Styrene	ND	50	13	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	50	13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	13	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AXIA WP		
Lab Sample ID:	D31495-1	**Date Sampled:**	01/30/12
Matrix:	AQ - Water	**Date Received:**	02/01/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	AXIA Water Handling Facility #421047		

VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	50	13	ug/l	
127-18-4	Tetrachloroethylene	ND	50	13	ug/l	
108-88-3	Toluene	2760	50	25	ug/l	
79-01-6	Trichloroethylene	ND	50	13	ug/l	
75-01-4	Vinyl chloride	ND	50	19	ug/l	
108-05-4	Vinyl Acetate	ND	130	63	ug/l	
1330-20-7	Xylene (total)	3500	100	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	87%		67-131%
2037-26-5	Toluene-D8	96%		65-130%
460-00-4	4-Bromofluorobenzene	126%		65-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1
Matrix: AQ - Water
Method: SW846 8270C SW846 3510C
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G106414.D	5	02/02/12	DC	02/01/12	OP5279	E1G602
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	95	36	ug/l	
95-57-8	2-Chlorophenol	ND	24	2.8	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	24	2.4	ug/l	
120-83-2	2,4-Dichlorophenol	ND	24	2.5	ug/l	
105-67-9	2,4-Dimethylphenol	67.9	24	4.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	19	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	48	24	ug/l	
95-48-7	2-Methylphenol	232	24	2.6	ug/l	
106-44-5	4-Methylphenol	97.8	24	2.4	ug/l	
88-75-5	2-Nitrophenol	ND	24	2.7	ug/l	
100-02-7	4-Nitrophenol	ND	36	14	ug/l	
87-86-5	Pentachlorophenol	ND	24	3.3	ug/l	
108-95-2	Phenol	233	24	2.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	24	3.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	24	2.8	ug/l	
83-32-9	Acenaphthene	ND	24	3.0	ug/l	
208-96-8	Acenaphthylene	ND	24	3.0	ug/l	
120-12-7	Anthracene	ND	24	2.4	ug/l	
56-55-3	Benzo(a)anthracene	ND	24	2.4	ug/l	
50-32-8	Benzo(a)pyrene	ND	24	2.4	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	24	2.4	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	24	2.7	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	24	2.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	24	2.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	24	2.4	ug/l	
100-51-6	Benzyl Alcohol	27.7	24	3.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	24	3.1	ug/l	
106-47-8	4-Chloroaniline	ND	24	2.4	ug/l	
218-01-9	Chrysene	ND	24	2.4	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	24	3.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	24	3.4	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	24	3.2	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1
Matrix: AQ - Water
Method: SW846 8270C SW846 3510C
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

ABN HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl phenyl ether	ND	24	2.7	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	24	3.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	24	4.3	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	24	3.6	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	24	2.4	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	24	2.4	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	24	2.9	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	24	3.9	ug/l	
132-64-9	Dibenzofuran	4.1	24	2.8	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	24	2.5	ug/l	
117-84-0	Di-n-octyl phthalate	ND	24	2.5	ug/l	
84-66-2	Diethyl phthalate	ND	24	2.4	ug/l	
131-11-3	Dimethyl phthalate	ND	24	2.4	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	24	8.1	ug/l	
206-44-0	Fluoranthene	ND	24	3.6	ug/l	
86-73-7	Fluorene	13.9	24	2.8	ug/l	J
118-74-1	Hexachlorobenzene	ND	24	2.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	24	3.8	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	48	24	ug/l	
67-72-1	Hexachloroethane	ND	24	4.8	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	24	7.8	ug/l	
78-59-1	Isophorone	ND	24	2.9	ug/l	
91-57-6	2-Methylnaphthalene	269	24	3.4	ug/l	
88-74-4	2-Nitroaniline	ND	24	2.4	ug/l	
99-09-2	3-Nitroaniline	ND	24	2.8	ug/l	
100-01-6	4-Nitroaniline	ND	24	2.7	ug/l	
91-20-3	Naphthalene	99.2	24	3.7	ug/l	
98-95-3	Nitrobenzene	ND	24	3.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	24	3.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	24	2.4	ug/l	
85-01-8	Phenanthrene	ND	24	2.4	ug/l	
129-00-0	Pyrene	ND	24	2.4	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	24	4.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		10-130%
4165-62-2	Phenol-d5	39%		10-136%
118-79-6	2,4,6-Tribromophenol	80%		10-153%
4165-60-0	Nitrobenzene-d5	91%		10-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AXIA WP		
Lab Sample ID:	D31495-1	**Date Sampled:**	01/30/12
Matrix:	AQ - Water	**Date Received:**	02/01/12
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	AXIA Water Handling Facility #421047		

ABN HSL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	80%		10-130%
1718-51-0	Terphenyl-d14	99%		13-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1
Matrix: AQ - Water
Method: SW846 8015B
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA15056.D	10	02/02/12	SK	n/a	n/a	GGA846
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	21.0	2.0	1.0	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	107%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AXIA WP		
Lab Sample ID:	D31495-1	**Date Sampled:**	01/30/12
Matrix:	AQ - Water	**Date Received:**	02/01/12
Method:	SW846-8015B SW846 3510C	**Percent Solids:**	n/a
Project:	AXIA Water Handling Facility #421047		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH000983.D	1	02/03/12	TR	02/01/12	OP5278	GFH38
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	46.4	0.38	0.30	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		25-146%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1
Matrix: AQ - Water
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	1040	5.0	mg/l	1	02/02/12	JK	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	02/02/12	JK	SM20 2320B
Alkalinity, Total as CaCO3	1040	5.0	mg/l	1	02/02/12	JK	SM20 2320B
Bromide	33.5	10	mg/l	50	02/01/12 13:45	GH	EPA 300/SW846 9056
Chloride	12200	250	mg/l	500	02/01/12 19:09	GH	EPA 300/SW846 9056
Fluoride	16.2	10	mg/l	50	02/01/12 13:45	GH	EPA 300/SW846 9056
Nitrogen, Nitrate [a]	< 2.3	2.3	mg/l	50	02/01/12 13:45	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 15	15	mg/l	250	02/01/12 18:58	GH	EPA 300/SW846 9056
Phosphate, Ortho [a]	< 3.3	3.3	mg/l	50	02/01/12 13:45	GH	EPA 300/SW846 9056
Solids, Total Dissolved	21300	10	mg/l	1	02/02/12	CJ	SM20 2540C
Specific Conductivity	34900	1.0	umhos/cm	1	02/02/12	JK	SM20 2510B
Sulfate	56.6	25	mg/l	50	02/01/12 13:45	GH	EPA 300/SW846 9056
pH	7.54		su	1	02/01/12 12:15	JK	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: AXIA WP
Lab Sample ID: D31495-1F
Matrix: AQ - Water Filtered
Project: AXIA Water Handling Facility #421047

Date Sampled: 01/30/12
Date Received: 02/01/12
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Calcium	157000	400	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Iron	2740	70	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	29300	200	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Manganese	474	5.0	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	57600	1000	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Selenium	< 50	50	ug/l	1	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	7030000	4000	ug/l	10	02/01/12	02/02/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2158
(2) Prep QC Batch: MP6759

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

1 of 1

ACCUTEST Laboratories
10165 Harwin Drive , Houston, TX 77036 ; Phone 713-271-4700 ; Fax 713-271-4770

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote: | Accutest Job #: D31495

Client / Reporting Information

Company Name: Olsson Associates
Project Contact: Stuart Hall | E-Mail: shall@oaconsulting.com
Address: 826 21 1/2 Road
City: Grand Junction | State: CO | Zip: 81505
Phone No.: 970-263-7800 | Fax No.:
Samplers's Name: Stuart Hall

Project Information

Project Name / No.: AXIA Buzzard Creek Spill Response
Bill to: Olsson Assocaites | Invoice Attn.: Stuart Hall
Address: 826 21 1/2 Road
City: Grand Junction | State: CO | Zip: 81505
Phone No.: 970-263-7800 | Fax No.:
Client Purchase Order #: 012-0250

Requested Analyses

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SO - Soil; SL - Sludge; OI - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	ENCORE	NaHSO4	MEOH	NONE	VOC-8260	SVOC-8270C	TVPH, TEPH-8015M - Five Fractions	Anions*	Dissolved Metals**	Alkalinity-Carb/BiCarb	SPCon, pH, TDS	LAB USE ONLY
	AXIA WP	1/30/2012	1845	W	18								18	x	x	x	x	x	x	x	01

Turnaround Time (Business days)

- [ ] 10 Day *STANDARD*
- [ ] 7 Day (per contract)
- [ ] 4 Day *RUSH*
- [x] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Approved By:/ Date: Renn Jackson 1/31/12

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [x] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

AMS FEDEX Account Number - 467721860

*Anions-Cl,F,Br,NO2,NO3,o-phosphate,SO4
**Dissolved Metals (Please lab filter)-As,Ca,Fe,Mg,Mn,K,Na,Se,As

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1/31/12 1600	1 2/1 9:00	2		2
3			3	4		4
5			5	Custody Seal # Fed Ex ☐		On Ice ✓ Cooler Temp. 3.1

5.1 5

D31495: Chain of Custody
Page 1 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D31495 **Client:** OLSSON **Immediate Client Services Action Required:** No

Date / Time Received: 2/1/2012 9:00:00 AM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: AXIA **Airbill #'s:** FEDEX

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

5.1

5

D31495: Chain of Custody

Page 2 of 4

Job Change Order: D31495_2/7/2012

Requested	2/7/2012	**Received Date:**	2/1/2012
Account Name:	Olsson Associates	**Due Date:**	2/3/2012
Project	AXIA Buzzard Creek Spill Response	**Deliverable:**	COMMBN
CSR:	RR	**TAT (Days):**	0

Sample #:
D31495-ALL

Change: Please change the project name from AXIA Buzzard Creek Spill Response to AXIA Water Handling Facility per an email from Stuart Hall 2/7/12 and reissue report. Thank you.

Above Changes Per: Stuart Hall-Client **Date:** 2/7/2012

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

5.1

5

D31495: Chain of Custody
Page 3 of 4

Job Change Order: D31495_2/7/2012

Requested	2/7/2012	**Received Date:**	2/1/2012
Account Name:	Olsson Associates	**Due Date:**	2/3/2012
Project	AXIA Buzzard Creek Spill Response	**Deliverable:**	COMMBN
CSR:	RR	**TAT (Days):**	0

Sample #:
D31495-ALL

Change: Please change the project name from AXIA Buzzard Creek Spill Response to AXIA Water Handling Facility per an email from Stuart Hall 2/7/12 and reissue report. Thank you.

Above Changes Per: Stuart Hall-Client **Date:** 2/7/2012

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

D31495: Chain of Custody
Page 4 of 4

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V606-MB	6V11473.D	1	02/01/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10	5.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.4	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.77	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.32	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.54	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.90	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	2.5	ug/l	
74-83-9	Methyl bromide	ND	5.0	2.9	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.58	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.5	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.5	ug/l	
100-42-5	Styrene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.50	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.50	ug/l	

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V606-MB	6V11473.D	1	02/01/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	2.0	0.75	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	2.5	ug/l	
1330-20-7	Xylene (total)	ND	4.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	86%	67-131%
2037-26-5	Toluene-D8	95%	65-130%
460-00-4	4-Bromofluorobenzene	118%	65-130%

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V606-BS	6V11474.D	1	02/01/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	68.3	137	31-168
71-43-2	Benzene	50	48.4	97	70-130
75-27-4	Bromodichloromethane	50	56.2	112	70-130
75-25-2	Bromoform	50	54.0	108	64-132
108-90-7	Chlorobenzene	50	47.9	96	70-130
75-00-3	Chloroethane	50	50.6	101	43-140
67-66-3	Chloroform	50	55.4	111	70-130
110-75-8	2-Chloroethyl vinyl ether	50	50.0	100	10-266
75-15-0	Carbon disulfide	50	47.2	94	61-144
56-23-5	Carbon tetrachloride	50	62.4	125	66-151
75-34-3	1,1-Dichloroethane	50	54.1	108	70-135
75-35-4	1,1-Dichloroethylene	50	46.6	93	70-132
107-06-2	1,2-Dichloroethane	50	58.4	117	70-137
78-87-5	1,2-Dichloropropane	50	52.4	105	70-130
124-48-1	Dibromochloromethane	50	54.8	110	70-133
156-59-2	cis-1,2-Dichloroethylene	50	48.3	97	70-132
10061-01-5	cis-1,3-Dichloropropene	50	48.2	96	70-130
541-73-1	m-Dichlorobenzene	50	50.2	100	70-130
95-50-1	o-Dichlorobenzene	50	50.0	100	70-130
106-46-7	p-Dichlorobenzene	50	49.5	99	70-130
156-60-5	trans-1,2-Dichloroethylene	50	45.6	91	70-135
10061-02-6	trans-1,3-Dichloropropene	50	51.8	104	63-130
100-41-4	Ethylbenzene	50	49.1	98	70-130
591-78-6	2-Hexanone	50	67.7	135* [a]	53-130
108-10-1	4-Methyl-2-pentanone	50	48.4	97	58-130
74-83-9	Methyl bromide	50	48.9	98	10-188
74-87-3	Methyl chloride	50	58.1	116	31-131
75-09-2	Methylene chloride	50	48.9	98	70-130
78-93-3	Methyl ethyl ketone	50	70.5	141* [a]	53-137
100-42-5	Styrene	50	49.4	99	70-130
71-55-6	1,1,1-Trichloroethane	50	58.2	116	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	45.7	91	64-130
79-00-5	1,1,2-Trichloroethane	50	51.4	103	70-130
127-18-4	Tetrachloroethylene	50	49.6	99	70-130
108-88-3	Toluene	50	46.4	93	70-130
79-01-6	Trichloroethylene	50	51.8	104	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V606-BS	6V11474.D	1	02/01/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-01-4	Vinyl chloride	50	48.2	96	33-130
108-05-4	Vinyl Acetate	50	46.3	93	42-253
1330-20-7	Xylene (total)	150	146	97	56-138

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	84%	67-131%
2037-26-5	Toluene-D8	95%	65-130%
460-00-4	4-Bromofluorobenzene	128%	65-130%

(a) Analyte is over range, but it is ND in associated samples.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D31305-1MS	6V11477.D	200	02/02/12	BR	n/a	n/a	V6V606
D31305-1MSD	6V11478.D	200	02/02/12	BR	n/a	n/a	V6V606
D31305-1	6V11476.D	100	02/02/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	D31305-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	822	J	10000	14100	133	13800	130	2	19-184/30
71-43-2	Benzene	5070		10000	14900	98	14400	93	3	61-133/30
75-27-4	Bromodichloromethane	ND		10000	11500	115	11000	110	4	70-130/30
75-25-2	Bromoform	ND		10000	10900	109	11000	110	1	59-137/30
108-90-7	Chlorobenzene	ND		10000	9830	98	9670	97	2	70-130/30
75-00-3	Chloroethane	ND		10000	10100	101	9600	96	5	42-141/30
67-66-3	Chloroform	ND		10000	11300	113	11100	111	2	70-135/30
110-75-8	2-Chloroethyl vinyl ether	ND		10000	9940	99	9640	96	3	10-266/30
75-15-0	Carbon disulfide	ND		10000	9570	96	9310	93	3	45-152/30
56-23-5	Carbon tetrachloride	ND		10000	12700	127	12300	123	3	62-155/30
75-34-3	1,1-Dichloroethane	ND		10000	11100	111	10900	109	2	70-136/30
75-35-4	1,1-Dichloroethylene	ND		10000	10300	103	9390	94	9	70-135/30
107-06-2	1,2-Dichloroethane	ND		10000	12000	120	12000	120	0	69-141/30
78-87-5	1,2-Dichloropropane	ND		10000	10700	107	10400	104	3	70-130/30
124-48-1	Dibromochloromethane	ND		10000	11200	112	11000	110	2	67-136/30
156-59-2	cis-1,2-Dichloroethylene	ND		10000	9840	98	9860	99	0	70-132/30
10061-01-5	cis-1,3-Dichloropropene	ND		10000	10200	102	9980	100	2	69-130/30
541-73-1	m-Dichlorobenzene	ND		10000	10100	101	9830	98	3	70-130/30
95-50-1	o-Dichlorobenzene	ND		10000	10000	100	10000	100	0	70-130/30
106-46-7	p-Dichlorobenzene	ND		10000	9840	98	9690	97	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		10000	9240	92	9240	92	0	68-137/30
10061-02-6	trans-1,3-Dichloropropene	ND		10000	10700	107	10500	105	2	62-130/30
100-41-4	Ethylbenzene	561		10000	10500	99	10400	98	1	70-130/30
591-78-6	2-Hexanone	ND		10000	13200	132	13200	132	0	44-138/30
108-10-1	4-Methyl-2-pentanone	ND		10000	9220	92	9860	99	7	51-134/30
74-83-9	Methyl bromide	ND		10000	10300	103	10200	102	1	10-193/30
74-87-3	Methyl chloride	ND		10000	12300	123	12600	126	2	26-134/30
75-09-2	Methylene chloride	ND		10000	9850	99	9520	95	3	70-130/30
78-93-3	Methyl ethyl ketone	ND		10000	12000	120	13300	133	10	40-153/30
100-42-5	Styrene	ND		10000	10300	103	10000	100	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		10000	11900	119	11300	113	5	69-132/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		10000	8780	88	8980	90	2	53-131/30
79-00-5	1,1,2-Trichloroethane	ND		10000	10400	104	10300	103	1	70-130/30
127-18-4	Tetrachloroethylene	ND		10000	10300	103	9710	97	6	70-130/30
108-88-3	Toluene	9710		10000	19000	93	18800	91	1	70-130/30
79-01-6	Trichloroethylene	ND		10000	10500	105	10300	103	2	58-147/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D31305-1MS	6V11477.D	200	02/02/12	BR	n/a	n/a	V6V606
D31305-1MSD	6V11478.D	200	02/02/12	BR	n/a	n/a	V6V606
D31305-1	6V11476.D	100	02/02/12	BR	n/a	n/a	V6V606

The QC reported here applies to the following samples: **Method:** SW846 8260B

D31495-1

CAS No.	Compound	D31305-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	ND		10000	10100	101	10600	106	5	33-130/30
108-05-4	Vinyl Acetate	ND		10000	9690	97	10100	101	4	28-285/30
1330-20-7	Xylene (total)	7260		30000	37400	100	36200	96	3	56-138/30

CAS No.	Surrogate Recoveries	MS	MSD	D31305-1	Limits
17060-07-0	1,2-Dichloroethane-D4	81%	84%	84%	67-131%
2037-26-5	Toluene-D8	95%	95%	94%	65-130%
460-00-4	4-Bromofluorobenzene	128%	127%	121%	65-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MB	1G106408.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	20	7.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.58	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.52	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.85	ug/l	
51-28-5	2,4-Dinitrophenol	ND	5.0	4.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	5.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.55	ug/l	
106-44-5	4-Methylphenol	ND	5.0	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.56	ug/l	
100-02-7	4-Nitrophenol	ND	7.5	3.0	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	0.70	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.78	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.59	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.63	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.63	ug/l	
120-12-7	Anthracene	ND	5.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.50	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.57	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.50	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	0.64	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.66	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.51	ug/l	
218-01-9	Chrysene	ND	5.0	0.50	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.69	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.72	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.67	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.56	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.74	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.90	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.76	ug/l	

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MB	1G106408.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.50	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.61	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.82	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.58	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.52	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.52	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.7	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.75	ug/l	
86-73-7	Fluorene	ND	5.0	0.58	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.50	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.80	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	5.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	1.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.6	ug/l	
78-59-1	Isophorone	ND	5.0	0.61	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.72	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.59	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.56	ug/l	
91-20-3	Naphthalene	ND	5.0	0.77	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.69	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.69	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.50	ug/l	
129-00-0	Pyrene	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.87	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	56%	10-130%
4165-62-2	Phenol-d5	37%	10-136%
118-79-6	2,4,6-Tribromophenol	94%	10-153%

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MB	1G106408.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	82%	10-130%
321-60-8	2-Fluorobiphenyl	79%	10-130%
1718-51-0	Terphenyl-d14	110%	13-130%

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-BS	1G106409.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	11.4	23	10-159
95-57-8	2-Chlorophenol	50	32.6	65	10-163
59-50-7	4-Chloro-3-methyl phenol	50	34.7	69	11-152
120-83-2	2,4-Dichlorophenol	50	34.0	68	10-165
105-67-9	2,4-Dimethylphenol	50	30.7	61	10-130
51-28-5	2,4-Dinitrophenol	50	34.3	69	10-179
534-52-1	4,6-Dinitro-o-cresol	50	38.6	77	10-183
95-48-7	2-Methylphenol	50	29.1	58	13-143
106-44-5	4-Methylphenol	50	26.4	53	10-147
88-75-5	2-Nitrophenol	50	33.3	67	10-160
100-02-7	4-Nitrophenol	50	18.3	37	10-159
87-86-5	Pentachlorophenol	50	35.4	71	10-181
108-95-2	Phenol	50	17.3	35	10-164
95-95-4	2,4,5-Trichlorophenol	50	36.2	72	10-166
88-06-2	2,4,6-Trichlorophenol	50	37.4	75	10-158
83-32-9	Acenaphthene	50	37.3	75	40-130
208-96-8	Acenaphthylene	50	38.0	76	41-130
120-12-7	Anthracene	50	44.0	88	45-130
56-55-3	Benzo(a)anthracene	50	42.4	85	43-136
50-32-8	Benzo(a)pyrene	50	44.6	89	40-132
205-99-2	Benzo(b)fluoranthene	50	40.9	82	38-147
191-24-2	Benzo(g,h,i)perylene	50	59.3	119	33-136
207-08-9	Benzo(k)fluoranthene	50	42.0	84	41-140
101-55-3	4-Bromophenyl phenyl ether	50	45.3	91	40-138
85-68-7	Butyl benzyl phthalate	50	49.3	99	46-130
100-51-6	Benzyl Alcohol	50	50.1	100	35-134
91-58-7	2-Chloronaphthalene	50	35.4	71	37-130
106-47-8	4-Chloroaniline	50	37.5	75	37-130
218-01-9	Chrysene	50	45.1	90	42-130
111-91-1	bis(2-Chloroethoxy)methane	50	35.3	71	37-130
111-44-4	bis(2-Chloroethyl)ether	50	34.2	68	33-131
108-60-1	bis(2-Chloroisopropyl)ether	50	32.9	66	30-130
7005-72-3	4-Chlorophenyl phenyl ether	50	40.1	80	40-130
95-50-1	1,2-Dichlorobenzene	50	27.7	55	23-133
541-73-1	1,3-Dichlorobenzene	50	24.9	50	18-134
106-46-7	1,4-Dichlorobenzene	50	26.3	53	18-134

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-BS	1G106409.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
121-14-2	2,4-Dinitrotoluene	50	45.6	91	38-149
606-20-2	2,6-Dinitrotoluene	50	43.3	87	44-135
91-94-1	3,3'-Dichlorobenzidine	50	26.2	52	21-137
53-70-3	Dibenzo(a,h)anthracene	50	56.5	113	35-139
132-64-9	Dibenzofuran	50	40.8	82	37-130
84-74-2	Di-n-butyl phthalate	50	46.1	92	45-132
117-84-0	Di-n-octyl phthalate	50	37.3	75	18-163
84-66-2	Diethyl phthalate	50	38.3	77	39-130
131-11-3	Dimethyl phthalate	50	41.3	83	40-130
117-81-7	bis(2-Ethylhexyl)phthalate	50	38.9	78	44-130
206-44-0	Fluoranthene	50	43.3	87	39-139
86-73-7	Fluorene	50	41.0	82	44-130
118-74-1	Hexachlorobenzene	50	46.4	93	33-142
87-68-3	Hexachlorobutadiene	50	19.6	39	19-132
77-47-4	Hexachlorocyclopentadiene	50	21.9	44	10-130
67-72-1	Hexachloroethane	50	19.5	39	15-130
193-39-5	Indeno(1,2,3-cd)pyrene	50	50.6	101	29-140
78-59-1	Isophorone	50	39.3	79	46-135
91-57-6	2-Methylnaphthalene	50	33.1	66	32-130
88-74-4	2-Nitroaniline	50	40.4	81	46-130
99-09-2	3-Nitroaniline	50	37.5	75	47-130
100-01-6	4-Nitroaniline	50	44.4	89	22-161
91-20-3	Naphthalene	50	32.9	66	30-130
98-95-3	Nitrobenzene	50	34.9	70	37-130
621-64-7	N-Nitroso-di-n-propylamine	50	36.7	73	41-130
86-30-6	N-Nitrosodiphenylamine	50	44.9	90	39-138
85-01-8	Phenanthrene	50	43.5	87	40-130
129-00-0	Pyrene	50	67.2	134* [a]	42-131
120-82-1	1,2,4-Trichlorobenzene	50	27.2	54	25-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	10-130%
4165-62-2	Phenol-d5	30%	10-136%
118-79-6	2,4,6-Tribromophenol	91%	10-153%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-BS	1G106409.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	69%	10-130%
321-60-8	2-Fluorobiphenyl	72%	10-130%
1718-51-0	Terphenyl-d14	130%	13-130%

(a) Outside control limits. Compounds are ND for associated samples.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MS	1G106411.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
OP5279-MSD	1G106412.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
D31341-15	1G106410.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	D31341-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	12.5	25	12.4	25	1	10-159/30
95-57-8	2-Chlorophenol	ND		50	22.8	46	27.4	55	18	10-163/30
59-50-7	4-Chloro-3-methyl phenol	ND		50	28.9	58	30.9	62	7	10-152/30
120-83-2	2,4-Dichlorophenol	ND		50	25.1	50	28.2	56	12	10-165/30
105-67-9	2,4-Dimethylphenol	ND		50	18.3	37	20.6	41	12	10-130/30
51-28-5	2,4-Dinitrophenol	ND		50	34.6	69	35.4	71	2	10-196/30
534-52-1	4,6-Dinitro-o-cresol	ND		50	36.6	73	37.3	75	2	10-187/30
95-48-7	2-Methylphenol	ND		50	20.1	40	23.5	47	16	10-143/30
106-44-5	4-Methylphenol	ND		50	19.2	38	22.1	44	14	10-147/30
88-75-5	2-Nitrophenol	ND		50	24.2	48	28.1	56	15	10-160/30
100-02-7	4-Nitrophenol	ND		50	17.8	36	17.9	36	1	10-165/30
87-86-5	Pentachlorophenol	ND		50	32.7	65	34.4	69	5	10-181/30
108-95-2	Phenol	ND		50	12.5	25	14.0	28	11	10-164/30
95-95-4	2,4,5-Trichlorophenol	ND		50	30.3	61	33.4	67	10	10-166/30
88-06-2	2,4,6-Trichlorophenol	ND		50	30.6	61	32.8	66	7	10-164/30
83-32-9	Acenaphthene	ND		50	30.1	60	32.6	65	8	10-174/30
208-96-8	Acenaphthylene	ND		50	29.2	58	31.4	63	7	41-130/30
120-12-7	Anthracene	ND		50	40.0	80	41.3	83	3	39-130/30
56-55-3	Benzo(a)anthracene	ND		50	39.2	78	40.4	81	3	43-136/30
50-32-8	Benzo(a)pyrene	ND		50	41.4	83	42.7	85	3	10-181/30
205-99-2	Benzo(b)fluoranthene	ND		50	43.0	86	43.3	87	1	38-147/30
191-24-2	Benzo(g,h,i)perylene	ND		50	53.3	107	55.7	111	4	33-136/30
207-08-9	Benzo(k)fluoranthene	ND		50	41.6	83	43.5	87	4	41-140/30
101-55-3	4-Bromophenyl phenyl ether	ND		50	39.8	80	42.5	85	7	40-138/30
85-68-7	Butyl benzyl phthalate	ND		50	46.5	93	48.9	98	5	10-187/30
100-51-6	Benzyl Alcohol	ND		50	34.6	69	39.4	79	13	22-137/30
91-58-7	2-Chloronaphthalene	ND		50	26.6	53	29.2	58	9	13-151/30
106-47-8	4-Chloroaniline	ND		50	24.9	50	26.2	52	5	10-130/30
218-01-9	Chrysene	ND		50	42.0	84	43.3	87	3	41-130/30
111-91-1	bis(2-Chloroethoxy)methane	ND		50	26.0	52	28.8	58	10	37-130/30
111-44-4	bis(2-Chloroethyl)ether	ND		50	24.1	48	28.9	58	18	33-131/30
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	22.6	45	26.3	53	15	30-130/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	35.0	70	36.7	73	5	13-157/30
95-50-1	1,2-Dichlorobenzene	ND		50	18.2	36	21.9	44	18	23-133/30
541-73-1	1,3-Dichlorobenzene	ND		50	16.2	32	19.7	39	19	18-134/30
106-46-7	1,4-Dichlorobenzene	ND		50	16.9	34	20.4	41	19	18-134/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MS	1G106411.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
OP5279-MSD	1G106412.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
D31341-15	1G106410.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Compound	D31341-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	ND		50	43.1	86	44.5	89	3	17-175/30
606-20-2	2,6-Dinitrotoluene	ND		50	40.0	80	41.8	84	4	25-158/30
91-94-1	3,3'-Dichlorobenzidine	ND		50	23.4	47	24.4	49	4	10-183/30
53-70-3	Dibenzo(a,h)anthracene	ND		50	51.5	103	53.8	108	4	35-139/30
132-64-9	Dibenzofuran	ND		50	33.8	68	36.4	73	7	18-148/30
84-74-2	Di-n-butyl phthalate	ND		50	42.8	86	44.6	89	4	33-141/30
117-84-0	Di-n-octyl phthalate	ND		50	39.0	78	39.8	80	2	18-163/30
84-66-2	Diethyl phthalate	ND		50	36.6	73	37.2	74	2	10-191/30
131-11-3	Dimethyl phthalate	ND		50	38.4	77	39.4	79	3	23-147/30
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	39.8	80	41.6	83	4	29-146/30
206-44-0	Fluoranthene	ND		50	41.7	83	42.3	85	1	39-139/30
86-73-7	Fluorene	ND		50	35.7	71	37.8	76	6	15-162/30
118-74-1	Hexachlorobenzene	ND		50	42.0	84	44.7	89	6	33-142/30
87-68-3	Hexachlorobutadiene	ND		50	12.8	26	15.3	31	18	19-132/30
77-47-4	Hexachlorocyclopentadiene	ND		50	15.8	32	18.1	36	14	10-186/30
67-72-1	Hexachloroethane	ND		50	12.5	25	15.5	31	21	15-130/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.6	91	47.1	94	3	10-188/30
78-59-1	Isophorone	ND		50	30.5	61	33.1	66	8	44-135/30
91-57-6	2-Methylnaphthalene	ND		50	23.8	48	26.8	54	12	24-132/30
88-74-4	2-Nitroaniline	ND		50	35.7	71	37.6	75	5	27-134/30
99-09-2	3-Nitroaniline	ND		50	33.9	68	32.7	65	4	42-130/30
100-01-6	4-Nitroaniline	ND		50	40.7	81	41.4	83	2	22-161/30
91-20-3	Naphthalene	ND		50	22.9	46	26.6	53	15	25-130/30
98-95-3	Nitrobenzene	ND		50	25.8	52	29.6	59	14	37-130/30
621-64-7	N-Nitroso-di-n-propylamine	ND		50	27.2	54	30.4	61	11	41-130/30
86-30-6	N-Nitrosodiphenylamine	ND		50	37.2	74	40.3	81	8	27-138/30
85-01-8	Phenanthrene	ND		50	39.9	80	41.3	83	3	33-135/30
129-00-0	Pyrene	ND		50	53.8	108	57.9	116	7	30-143/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	18.2	36	21.3	43	16	25-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D31341-15	Limits
367-12-4	2-Fluorophenol	35%	39%	34%	10-130%
4165-62-2	Phenol-d5	23%	25%	22%	10-136%
118-79-6	2,4,6-Tribromophenol	87%	86%	66%	10-153%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5279-MS	1G106411.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
OP5279-MSD	1G106412.D	1	02/02/12	DC	02/01/12	OP5279	E1G602
D31341-15	1G106410.D	1	02/02/12	DC	02/01/12	OP5279	E1G602

The QC reported here applies to the following samples: **Method:** SW846 8270C

D31495-1

CAS No.	Surrogate Recoveries	MS	MSD	D31341-15	Limits
4165-60-0	Nitrobenzene-d5	54%	57%	47%	10-130%
321-60-8	2-Fluorobiphenyl	60%	60%	47%	10-130%
1718-51-0	Terphenyl-d14	111%	113%	95%	13-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA846-MB	GA15054.D	1	02/02/12	SK	n/a	n/a	GGA846

The QC reported here applies to the following samples: **Method:** SW846 8015B

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	103%	60-140%

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA846-BS	GA15055.D	1	02/02/12	SK	n/a	n/a	GGA846

The QC reported here applies to the following samples: **Method:** SW846 8015B

D31495-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	2.2	2.20	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	105%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D31495-1MS	GA15057.D	20	02/02/12	SK	n/a	n/a	GGA846
D31495-1MSD	GA15058.D	20	02/02/12	SK	n/a	n/a	GGA846
D31495-1	GA15056.D	10	02/02/12	SK	n/a	n/a	GGA846

The QC reported here applies to the following samples: **Method:** SW846 8015B

D31495-1

CAS No.	Compound	D31495-1 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	21.0		44	67.6	106	66.1	103	2	61-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D31495-1	Limits
120-82-1	1,2,4-Trichlorobenzene	115%	112%	107%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5278-MB	FH000971.D	1	02/02/12	TR	02/01/12	OP5278	GFH38

The QC reported here applies to the following samples: **Method:** SW846-8015B

D31495-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.40	0.32	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	70%	25-146%

Blank Spike Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5278-BS	FH000973.D	1	02/02/12	TR	02/01/12	OP5278	GFH38

The QC reported here applies to the following samples: **Method:** SW846-8015B

D31495-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	20	16.6	83	49-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	25-146%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D31495
Account: CORCCOGJ Olsson Associates
Project: AXIA Water Handling Facility #421047

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5278-MS	FH000975.D	1	02/02/12	TR	02/01/12	OP5278	GFH38
OP5278-MSD	FH000977.D	1	02/02/12	TR	02/01/12	OP5278	GFH38
D31341-14	FH000979.D	1	02/03/12	TR	02/01/12	OP5278	GFH38

The QC reported here applies to the following samples: **Method:** SW846-8015B

D31495-1

CAS No.	Compound	D31341-14 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND		20	18.2	91	19.0	95	4	47-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D31341-14	Limits
84-15-1	o-Terphenyl	102%	102%	84%	25-146%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 02/01/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9	0.60	<25
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	10.6	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13	2.3	<70
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	2.4	<200
Manganese	5.0	.053	.31	0.40	<5.0
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	-61	<1000
Selenium	50	3.8	3.8	2.8	<50
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	5.3	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6759: D31495-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 02/01/12

Metal	D31447-1 Original	MS	Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	7.6	1060	1000	105.2	75-125
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium	54800	80200	25000	101.6	75-125
Chromium	anr				
Cobalt					
Copper					
Iron	205	5290	5000	101.7	75-125
Lead	anr				
Lithium					
Magnesium	20600	46100	25000	102.0	75-125
Manganese	7.1	493	500	97.2	75-125
Molybdenum					
Nickel					
Phosphorus					
Potassium	1230	28300	25000	108.3	75-125
Selenium	0.0	1080	1000	108.0	75-125
Silicon					
Silver	anr				
Sodium	26200	52300	25000	104.4	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6759: D31495-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 02/01/12

Metal	D31447-1 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	7.6	1050	1000	104.2	0.9	20
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	54800	79900	25000	100.4	0.4	20
Chromium	anr					
Cobalt						
Copper						
Iron	205	5250	5000	100.9	0.8	20
Lead	anr					
Lithium						
Magnesium	20600	46000	25000	101.6	0.2	20
Manganese	7.1	493	500	97.2	0.0	20
Molybdenum						
Nickel						
Phosphorus						
Potassium	1230	28200	25000	107.9	0.4	20
Selenium	0.0	1070	1000	107.0	0.9	20
Silicon						
Silver	anr					
Sodium	26200	52000	25000	103.2	0.6	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6759: D31495-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 02/01/12

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1020	1000	102.0	80-120
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	25200	25000	100.8	80-120
Chromium	anr			
Cobalt				
Copper				
Iron	5050	5000	101.0	80-120
Lead	anr			
Lithium				
Magnesium	25200	25000	100.8	80-120
Manganese	483	500	96.6	80-120
Molybdenum				
Nickel				
Phosphorus				
Potassium	26300	25000	105.2	80-120
Selenium	1050	1000	105.0	80-120
Silicon				
Silver	anr			
Sodium	25900	25000	103.6	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6759: D31495-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

QC Batch ID: MP6759
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN13520	5.0	0.0	mg/l	100	99.8	99.8	90-110%
Alkalinity, Carbonate	GN13521	5.0	0.0	mg/l	100	99.8	99.8	80-120%
Alkalinity, Total as CaCO3	GN13515	5.0	0.0	mg/l	100	99.8	99.8	90-110%
Bromide	GP6423/GN13504	0.20	0.0	mg/l	20	20.4	102.0	90-110%
Chloride	GP6423/GN13504	0.50	0.0	mg/l	20	19.8	99.0	90-110%
Fluoride	GP6423/GN13504	0.20	0.0	mg/l	10	9.44	94.4	90-110%
Nitrogen, Nitrate	GP6423/GN13504	0.045	0.0	mg/l	4.52	4.11	91.0	90-110%
Nitrogen, Nitrite	GP6423/GN13504	0.061	0.0	mg/l	6.09	6.12	100.5	90-110%
Phosphate, Ortho	GP6423/GN13504	0.065	0.0	mg/l	9.78	9.80	100.2	90-110%
Solids, Total Dissolved	GN13519	10	0.0	mg/l	400	408	102.0	90-110%
Specific Conductivity	GP6428/GN13518	1.0	<1.0	umhos/cm	99.4	104	104.2	90-110%
Sulfate	GP6423/GN13504	0.50	0.0	mg/l	30	29.5	98.3	90-110%
pH	GN13506			su	8.00	8.03	100.4	99.3-100.7%

Associated Samples:
Batch GN13506: D31495-1
Batch GN13515: D31495-1
Batch GN13519: D31495-1
Batch GN13520: D31495-1
Batch GN13521: D31495-1
Batch GP6423: D31495-1
Batch GP6428: D31495-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN13515	D31358-1	mg/l	161	164	1.8	0-20%
Solids, Total Dissolved	GN13519	D31485-1	mg/l	418	432	3.3	0-25%
Specific Conductivity	GP6428/GN13518	D31495-1	umhos/cm	34900	35200	0.9	0-20%

Associated Samples:
Batch GN13515: D31495-1
Batch GN13519: D31495-1
Batch GP6428: D31495-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN13515	D31358-1	mg/l	161	100	256	95.1	80-120%
Bromide	GP6423/GN13504	D31484-1	mg/l	0.57	12.5	13.2	101.0	80-120%
Chloride	GP6423/GN13504	D31484-1	mg/l	102	50	151	98.0	80-120%
Nitrogen, Nitrate	GP6423/GN13504	D31484-1	mg/l	3.9	5.65	9.1	92.0	80-120%
Nitrogen, Nitrite	GP6423/GN13504	D31484-1	mg/l	0.64	1.52	2.2	102.5	80-120%
Phosphate, Ortho	GP6423/GN13504	D31484-1	mg/l	1.2	4.08	5.2	98.2	80-120%
Sulfate	GP6423/GN13504	D31484-1	mg/l	6.0	50	56.7	101.4	80-120%

Associated Samples:
Batch GN13515: D31495-1
Batch GP6423: D31495-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D31495
Account: CORCCOGJ - Olsson Associates
Project: AXIA Water Handling Facility #421047

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN13515	D31358-1	mg/l	161	100	257	0.2	20%
Bromide	GP6423/GN13504	D31484-1	mg/l	0.57	12.5	13.3	0.8	20%
Chloride	GP6423/GN13504	D31484-1	mg/l	102	50	151	0.0	20%
Nitrogen, Nitrate	GP6423/GN13504	D31484-1	mg/l	3.9	5.65	8.8	3.4	20%
Nitrogen, Nitrite	GP6423/GN13504	D31484-1	mg/l	0.64	1.52	2.2	0.0	20%
Phosphate, Ortho	GP6423/GN13504	D31484-1	mg/l	1.2	4.08	5.3	1.9	20%
Sulfate	GP6423/GN13504	D31484-1	mg/l	6.0	50	56.8	0.2	20%

Associated Samples:
Batch GN13515: D31495-1
Batch GP6423: D31495-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits